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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,674	12/08/2000	Ralph Coleman Hedden	H26187-US	2847

7590

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Loria B. Yeadon  
Honeywell International Inc.  
Patent Services  
P.O. Box 2245  
Morristown, NJ 07962-2245

EXAMINER
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MOORE JR, MICHAEL J

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/732,674

Applicant(s)

HEDDEN, RALPH COLEMAN

Examiner

Michael J. Moore, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/15/2004 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims **1, 4, 5, 7-14, 16 and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by Iwata (U.S. 5,933,425). The Iwata reference teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim 1, "a method for selecting a Datalink Service Provider route for each individual digital message" is anticipated by the routing method spoken of in column 1, line 66 – column 2, line 18. "Providing a unique prioritization tag for each individual digital message, the unique prioritization tag comprising user chosen routing priority criteria, the routing priority criteria comprising route status information from the Datalink Service Provider" is anticipated by the user-specified quality-of-service (QoS)

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parameters that are checked against resource constraints of the links of each possible path of a network. "The priority criteria further comprising at least one of the following criteria: cost of sending the digital message, speed of delivery of the digital message, security of the digital message, and integrity of the digital message" is anticipated by the resource constraints such as transmission delay time (speed), delay time variation (security), transmission error rate (integrity), and cell loss rate (cost) spoken of in column 1, lines 19-22. "Supplying the prioritized criteria from the user to an overlay software" is anticipated by the checking of user-specified QoS parameters against resource constraints of the links stored in the link state database of Figure 1. Lastly, "automatically choosing the Datalink Service Provider route by evaluating the prioritized criteria in the overlay software; and routing each individual digital message through the chosen Datalink Service Provider route" is anticipated by the path selection based on satisfaction of all user-specified QoS parameters that is spoken of in column 1, lines 50-65.

Regarding claim 4, "repeating steps a) through d) for a next user" is anticipated by the plurality of user terminals shown in Figure 1.

Regarding claim 5, "repeating steps a) through d) for a next digital message" is anticipated by the plurality of user terminals shown in Figure 1. This system of Figure 1 has multiple user terminals that route multiple digital messages to a destination.

Regarding claim 7, "wherein the step of choosing a Datalink Service Provider route is performed at a member of the group consisting of a vehicle, a user initiation

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facility, and a government control facility" is anticipated by the user terminal 100 (vehicle or user initiation facility) as well as node A (control facility) shown in Figure 1.

Regarding claim **8 and 9**, the method of claim **1** providing either a manual or an automatic tag is anticipated by the user-specified quality-of-service (QoS) parameters that are checked against resource constraints of the links of each possible path of a network.

Regarding claim **10**, "the overlay software comprises at least one of the following: lookup tables, logarithmic calculations and real-time information on cost, available Datalink Service Provider routes, and Datalink Service Provider route status information" is anticipated by the link state database shown in Figure 1 that constitutes a lookup table that contains route status information.

Regarding claims **11 and 12**, updating the real-time information over time is anticipated by the periodic updating of stored link status information spoken of in column 2, lines 2-6.

Regarding claim **13**, "querying at least one Datalink Service Provider" is anticipated by the periodic updating of stored information according to link status of the network spoken of in column 2, lines 2-6. This link status information is found by querying network links (Datalink Service Providers) at any instant.

Regarding claim **14**, "An avionics routing method for an individual digital message" is anticipated by the routing method spoken of in column 1, line 66 – column 2, line 18. "Providing a unique prioritization tag for the individual digital message, the unique prioritization tag comprising user chosen routing priority criteria, the routing

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priority criteria comprising route status information from a Datalink Service Provider” is anticipated by the user-specified quality-of-service (QoS) parameters that are checked against resource constraints of the links of each possible path of a network. “A cost of sending the digital message, speed of delivery of the digital message, security of the digital message, and integrity of the digital message” is anticipated by the resource constraints such as transmission delay time (speed), delay time variation (security), transmission error rate (integrity), and cell loss rate (cost) spoken of in column 1, lines 19-22. “Supplying the priority criteria from the user to an overlay software” is anticipated by the checking of user-specified QoS parameters against resource constraints of the links stored in the link state database of Figure 1. Lastly, “Evaluating the priority criteria”, “automatically choosing a Datalink Service Provider route from at least two Datalink Service Provider service providers by the overlay software and “transmitting the individual digital message through the chosen Datalink Service Provider route” is anticipated by the path selection (Datalink Service Providers) based on satisfaction of all user-specified QoS parameters that is spoken of in column 1, lines 50-65.

Regarding claim **16**, “repeating steps a) through e) for a next digital message” is anticipated by the plurality of user terminals shown in Figure 1. This system of Figure 1 has multiple user terminals that route multiple digital messages to a destination.

Regarding claim **18**, “the overlay software comprises at least one of the following: lookup tables, logarithmic calculations and real-time information on cost, available Datalink Service Provider routes, and Datalink Service Provider route status

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information" is anticipated by the link state database shown in Figure 1 that constitutes a lookup table that contains route status information.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims **2, 3, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (U.S. 5,933,425) in view of Harper (U.S. 5,432,776).

Regarding claims **2, 3, and 15**, Iwata teaches the methods of claims **1 and 14**. Iwata fails to teach a step of tracking the chosen Datalink Service Provider route for accounting purposes. Iwata also fails to teach a step of preparing a billing record of the chosen Datalink Service Provider route. However, Harper teaches a message network monitoring system that contains some nodes that are monitored for accounting purposes. In column 1, lines 54-62, Harper teaches how usage monitoring can be used to conduct customer-billing practices. Harper continues in column 6, lines 13-27 that accounting digests (billing records) are generated that contain information concerning the nature and route of the message. At the time of the invention it would have obvious to a person of ordinary skill in the art given these references to combine the teachings of Iwata with the accounting methods taught by Harper. A motivation for doing so would be to improve network efficiency and/or provide a means for billing customers for network services as spoken of in column 1, lines 54-62 of Harper.

***Response to Arguments***

6. Applicant's arguments filed April 15, 2004 have been fully considered but they are not persuasive. Claims **1-5, 7-16, and 18** stand rejected with the reasoning that follows.

Regarding claim 1, Applicant argues that Iwata does not prioritize a message or add a prioritization tag to a digital message. Applicant further argues that Iwata rather defines a minimum acceptable set of criteria and validates and verifies that a route meets these criteria. However, claim 1 claims "providing a unique prioritization tag" for each digital message that comprises route status information (message cost, message speed, message security, message integrity) from a Datalink Service Provider that is chosen by a user. No further explanation of "a unique prioritization tag" is provided in the claims. Therefore, it is still held that the user-specified quality-of-service (QoS) parameters that are checked against resource constraints of the links of each possible path of a network as described in Iwata anticipate "providing a unique prioritization tag" for each message. These QoS parameters comprise resource constraints such as latency, jitter, error rate, and loss rate that all affect message cost, message speed, message security, and message integrity. These specified parameters are checked against route status information of the network links stored in a link state database (overlay software) and then an appropriate route is chosen.

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Applicant also argues that the instant application uses overlay software to determine a route/network based on the software that is tagged to a message whereas lwata is different in that a node itself chooses a route. Referring to claim 1, what is claimed in step b) is “supplying the prioritized criteria from the user to an overlay software”. No further explanation of “overlay software” is provided in claim 1. lwata teaches the checking of user-specified QoS parameters against route status information of the network links that are stored in a link state database as seen in Figure 1. This link state database is a form of software (lookup table) that is stored within node A, for example, of Figure 1.

Applicant also argues that the claims of the instant application discuss the actual cost that a service provider charges a user whereas lwata is concerned with performance measures provided by the service provider. Referring to claims 1 and 14, step I) recites “cost of sending the digital message”. This limitation does not discuss anything about actual cost that a service provider charges a user. Referring to claims 10 and 18, “real-time information on cost” is recited. This limitation also does not discuss anything about actual cost that a service provider charges a user.

Applicant also argues that lwata measures cell transmission delay and cell delay variation between nodes in a network whereas the instant application measures nothing. Referring to claims 1 and 14, step ii) recites “speed of delivery of the digital message”. Cell transmission delay (latency) and cell delay variation (jitter) are parameters that both affect the speed of delivery of a message.

Applicant also argues that the claimed security criteria of the instant application is not mentioned or implied in Iwata. However, cell transmission delay (latency), cell delay variation (jitter), transmission error rate, and cell loss rate are all parameters that affect "security of a digital message".

Applicant also argues that available cell rate and cell loss rate are characteristics of inter-node performance rather than integrity. However, ACR and CLR are both parameters that affect the reliability (integrity) of a network.

Applicant also argues that a route is confused with a network. Referring to claim 1, the claim recites "a method for selecting a Datalink Service Provider route for each individual message". This limitation does not define a route to be a network.

Applicant also argues that the instant application is not concerned with accounting, but rather about cost of a given route. Referring to claims 2 and 15, "the step of tracking the chosen Datalink Service Provider route for accounting purposes" is recited. It appears that these claims are concerned with accounting.

Applicant also argues that the instant application is not concerned with billing, but assumes that each route will have a cost. Referring to claim 3, "the step of preparing a billing record of the chosen Datalink Service Provider route" is recited. It appears that this claim is concerned with billing.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chang et al. (U.S. 6,111,673), Crinion et al. (U.S. 6,181,699), Chang et al. (U.S. 6,525,851), Okuyama et al. (US 2003/0043796), Wegner et al. (U.S.

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5,712,907), and Shaffer (U.S. 5,898,668) are all references that contain material pertinent to this application.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (703) 305-8703. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.  
Examiner  
Art Unit 2666

mjm MM

  
DANSTON  
PATENT ATTORNEY